

### **REMARKS**

Initially, Applicants note that the PTOL-326 enclosed with the Office Action indicates that *none* of the certified copies of the priority documents have been received. It is noted that the instant application is a national stage application under 35 U.S.C. 371 of international application no. PCT/FR03/02343. Accordingly, the required certified copy of the priority document would have been forwarded by the International Bureau. Therefore, Applicants respectfully request that the Examiner acknowledge receipt of the priority document in the next Office Action.

Regarding the Information Disclosure Statement (IDS) filed by Applicants on January 21, 2005, the French reference (FR 2 803 950) was not considered because the corresponding U.S. Publication number was incorrectly indicated. The correct U.S. Publication number is “2003/0010979”. Specifically, the U.S. Publication number was indicated as “2003/010979,” which is basically correct, except that a leading zero after the slash was omitted. Having now provided the corrected information, Applicants respectfully request that the French reference be considered. For the Examiner’s convenience, a new IDS form is enclosed herewith.

The drawings were objected to under 37 CFR 1.83(a). Claim 11 has been cancelled in order to obviate the objection.

Claim 3 was objected to due to an informality, which has been corrected appropriately by amendment herein.

Claim 11 was rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. Claim 11 has been canceled, thereby rendering the rejection moot.

Claims 1–3, 9–10 and 12–14 were rejected under 35 U.S.C. 102(b) as being anticipated by the cited publication entitled “High-Frequency, Long-Wavelength Resonant-Cavity-Enhanced InGaAs MSM Photodetectors” (hereinafter “Strittmatter”). Claim 1 has been amended to better

distinguish from the prior art. For the following reasons, the rejection has been rendered moot by the amendment.

The claimed device provides several advantages as compared to the device disclosed by Strittmatter. Specifically, it is not necessary to form a distributed Bragg reflector (DBR) on the structure (see Fig. 1 of Strittmatter), making the claimed device more simple and less expensive. Further, since the claimed device is illuminated from the top, there is no need to proceed to a polishing step during the fabrication process (see Strittmatter, page 146, the next to last paragraph). Also, the claimed device comprises a metallic sub-wavelength network (see page 13, lines 1–13 of the instant application) allowing it reach speeds of collecting carriers much higher than the device according to Strittmatter.

Strittmatter has an electrodes network with an interelectrode spacing of 1  $\mu\text{m}$  and an electrode width of 0.8  $\mu\text{m}$ , thus a period of the electrodes network is 1.8  $\mu\text{m}$  (see page 146, the next to last paragraph), not 1.0  $\mu\text{m}$  as indicated by the Examiner. Thus, the period disclosed by Strittmatter is greater than the 1.31  $\mu\text{m}$  wavelength of incident light. By contrast, the present application discloses, for example, a device having an electrodes network with a period of 0.2  $\mu\text{m}$  for an electrode width of 0.1  $\mu\text{m}$  (see page 8, lines 22–28). When comparing the period of the electrodes network, the disclosed device permits a gain of about a factor of 10 (see page 3, line 23 to page 4, lines 13).

With reference to amended claim 1, Strittmatter does not teach an “electrodes network forming a second mirror for the resonant cavity, *wherein the light to be detected is incident to the device through the electrodes network*,” as now claimed. Contrary to the device disclosed by Strittmatter, the claimed device received light to be detected by the side corresponding to the electrodes network. The device according to Strittmatter is illuminated *through* the InP substrate

(see the last paragraph on page 145). Since every limitation of the claims is not taught by Strittmatter, claim 1 and its dependent claims are not anticipated by the cited reference.

In light of the foregoing, it is respectfully submitted that the present application is in condition for allowance and notice to that effect is hereby requested. If it is determined that the application is not in condition for allowance, the Examiner is invited to initiate a telephone interview with the undersigned attorney to expedite prosecution of the present application.

If there are any additional fees resulting from this communication, please charge same to our Deposit Account No. 16-0820, our Order No. 37392.

Respectfully submitted,  
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